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10/532,070	04/21/2005	Kenji Yamane	OGW-0364	6097

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EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

MAIL DATE	DELIVERY MODE
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08/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/532,070

**Applicant(s)**

YAMANE, KENJI

**Examiner**

Steven D. Maki

**Art Unit**

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1) The amendment filed 5-14-07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The change to the formulas in the paragraphs beginning on page 9 line 17, page 9 line 23, page 10 line 8, page 12 line 8 in which "(2D/W)" was replaced with "(W/2D)--. The original disclosure fails to support changing the formulas in the specification by selectively using the reciprocal of "(2D/W)". One of ordinary skill in the art would not have recognized that "(2D/W)" as being an obvious error. Even if one of ordinary skill in the art recognized "(2D/W)" in the formulas to be an obvious error, one of ordinary skill in the art would not recognize the appropriate correction. See MPEP 2163.07. For example, one of ordinary skill in the art recognize that the reciprocal of "(2D/W)" should be used instead of other corrective actions such as using a different trigonometric function, using subtraction instead of division, adding additional coefficients, etc.

Applicant comments that the specification has been amended to correct inadvertent errors. However, applicant presented no reasons explaining why one skilled in the art would not only recognize the existence of error in the specification, but also the appropriate correction.

Applicant is required to cancel the new matter in the reply to this Office Action.

2) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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3) Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the subject matter of "a tire rotational directional side edge portion which is chamfered so that the tire rotational directional side groove wall surface is continuously connected to a ground contact surface" (emphasis added). The original disclosure supports a tire rotational directional side edge portion which is chamfered. However, the original disclosure fails to reasonably convey "continuously connecting" the "tire rotational directional side edge portion" to a "ground contact surface". The original disclosure provides no explicit basis for "so that the tire rotational directional side groove wall surface is continuously connected to a ground contact surface" and fails, for example, to teach that this edge portion is in contact with the road when it leaves the ground contact area of tire during rotation of the tire. Also, the language of "continuously connected" (in contrast to non-continuously connected) draws a distinction which is never described in the original disclosure,

In claims 2-4, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the

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inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the change to the formulas in which "(2D/W)" was replaced with --(W/2D)--. The original disclosure fails to support changing the formulas in the specification by selectively using the reciprocal of "(2D/W)". One of ordinary skill in the art would not have recognized that "(2D/W)" as being an obvious error. Even if one of ordinary skill in the art recognized "(2D/W)" in the formulas to be an obvious error, one of ordinary skill in the art would not recognize the appropriate correction. See MPEP 2163.07. For example, one of ordinary skill in the art recognize that the reciprocal of "(2D/W)" should be used instead of other corrective actions such as using a different trigonometric function, using subtraction instead of division, adding additional coefficients, etc.

Applicant comments that the claims 2-4 have been amended to correct inadvertent errors. However, applicant presented no reasons explaining why one skilled in the art would not only recognize the existence of error, but also the appropriate correction.

4) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5) Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the scope of "a tire rotational directional side edge portion which is chamfered so that the tire rotational directional side groove wall surface is continuously

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connected to a ground contact surface" (emphasis added) is unclear. It is unclear what limitation(s) are excluded and/or required by "continuously connected". Does "continuously connected" require contact after the wall leaves the ground contact area? Does "continuously connected" merely require wall surface to be "connected" to the block surface which contacts the ground in the ground contact area of the tire?

6) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Japan 303

7) **Claims 1, 6-10 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 303 (JP 6-166303) in view of Europe 989 (EP 602989).**

Japan 303, directed to reducing noise without lowering water discharging performance and maneuvering stability, discloses a pneumatic tire having a directional tread pattern comprising a center circumferential groove between a pair of ribs, main circumferential grooves, inclined subgrooves 3, middle blocks and shoulder blocks. See figure 1. Japan 303 teaches reducing noise by inclining the step in wall face of a block at angle alpha with respect to the radial direction of 5 degrees or more and inclining the kick out wall face of the block at an angle beta of 10 degrees or more wherein angle alpha is smaller than angle beta. Japan 303 does not recite chamfering the edges of the blocks.

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Europe 989 discloses a pneumatic tire having a directional tread comprising a center circumferential rib, middle blocks BM, shoulder blocks BS, circumferential grooves 3 and inclined axial grooves 4. Europe 989 teaches chamfering edges of the blocks to reduce noise and prevent increase in conicity force with wear. The radius of the chamfer is 0.3 to 3 mm.

As to claim 1, it would have been obvious to one of ordinary skill in the art to chamfer the edges of Japan 303's shoulder blocks since Europe 989, also directed to a directional tread pattern, suggests chamfering edges blocks to reduce noise and prevent increase in conicity force with wear.

With respect to "each of the blocks also has a tire rotational direction side edge portion which is chamfered so that the tire rotational direction side groove wall surface is continuously connected to a ground contact surface, and a tire reverse rotational direction side edge portion which has greater rigidity than the tire rotational direction side edge portion", the following comments are made: One of ordinary skill in the art would readily appreciate that at least a portion of the chamfered surface suggested by Europe 989 contacts the road since (1) Europe 989 teaches that conicity force increases with wear in tires having angled corners, which contact the ground (col. 1 lines 15-20, col. 4 lines 23-28) and (2) Europe 989 teaches that the curved portions ("chamfered corners") reduce, but do not eliminate, increase of conicity force with wear. Since at least a portion of the chamfered surface contacts the ground, Europe 989's teaching to round the edges (chamfer the edges) suggests the limitation of "tire rotational direction side edge portion which is chamfered so that the tire rotational

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direction side groove wall surface is continuously connected to a ground contact surface". Furthermore, Japan 303 teaches that the rigidity of the block at the trailing wall is greater than the rigidity at the leading wall to control vibration and reduce noise (paragraphs 6 and 8) and thereby provides ample suggestion to configure the block such that "a tire reverse rotational direction side edge portion ... has greater rigidity than the tire rotational direction side edge portion".

As to claim 6, Europe 989 suggests using a radius of 0.3 to 3 mm for the chamfer.

As to claims 7-10 and 13-15, see figure 1 of Japan 303.

**8) Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 303 in view of Europe 989 as applied above and further in view of Japan 609 (JP 6-270609).**

As to claims 2-5, it would have been obvious to use the specific angle alpha (claims 2 and 3) / specific angle beta (claims 4 and 5) when using width W and depth D as claimed in view of (1) Japan 303's teaching to reduce noise and form the wall faces using angles alpha of 5 degrees or more and angle beta or 10 degrees or more wherein angle alpha is smaller than angle beta, (2) Japan 609's suggestion to use a width W of 2-5 mm for shoulder grooves of a directional tread and (3) it is taken as well known / conventional per se in the tire tread art to use a depth of 6-11 mm (e.g. 8-11 mm) for grooves of a passenger car tire.



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**9) Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 303 in view of Europe 989 as applied above and further in view of Japan 505 (JP 64-36505).**

As to claim 16, it would have been obvious to use the claimed groove widths in view of Japan 505's suggestion to gradually decrease the groove widths of circumferential grooves of a directional tire tread pattern from the center to the side edges of the tire to reduce noise.

Japan 104

**10) Claims 1 and 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 104 (JP 62-026104) in view of Japan 303 and Europe 989.**

Japan 104 discloses a pneumatic tire for a passenger car comprising a center rib, circumferential grooves, inclined subgrooves, central blocks, middle blocks and shoulder blocks. Japan 104 does not recite using angles alpha and beta for the shoulder grooves.

As to claims 1 and 6-10, it would have been obvious to one of ordinary skill in the art to use the claimed angles alpha and beta for blocks separated by the shoulder grooves of Japan 104's directional tire tread pattern since Japan 303, also directed to a directional tire tread pattern, suggests reducing noise and forming wall faces of blocks using angles alpha of 5 degrees or more and angle beta or 10 degrees or more wherein angle alpha is smaller than angle beta.

Furthermore, it would have been obvious to one of ordinary skill in the art to chamfer the edges of Japan 104's shoulder blocks since Europe 989, also directed to a

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directional tread pattern, suggests chamfering edges blocks to reduce noise and prevent increase in conicity force with wear.

With respect to "each of the blocks also has a tire rotational direction side edge portion which is chamfered so that the tire rotational direction side groove wall surface is continuously connected to a ground contact surface, and a tire reverse rotational direction side edge portion which has greater rigidity than the tire rotational direction side edge portion", the following comments are made: One of ordinary skill in the art would readily appreciate that at least a portion of the chamfered surface suggested by Europe 989 contacts the road since (1) Europe 989 teaches that conicity force increases with wear in a tire having angled corners, which contact the ground (col. 1 lines 15-20, col. 4 lines 23-28) and (2) Europe 989 teaches that the curved portions ("chamfered corners") reduce, but do not eliminate, increase of conicity force with wear. Since at least a portion of the chamfered surface contacts the ground, Europe 989's teaching to round the edges (chamfer the edges) suggests the limitation of "tire rotational direction side edge portion which is chamfered so that the tire rotational direction side groove wall surface is continuously connected to a ground contact surface". Furthermore, Japan 303 teaches that the rigidity of the block at the trailing wall is greater than the rigidity at the leading wall to control vibration and reduce noise (paragraphs 6 and 8) and thereby provides ample suggestion to configure the block such that "a tire reverse rotational direction side edge portion ... has greater rigidity than the tire rotational direction side edge portion".

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As to claims 11 and 12, the circumferential groove on each side of the center rib comprises convex groove portions. See figure 2.

#### Remarks

11) Applicant's arguments filed 5-14-07 have been fully considered but they are not persuasive.

Applicant argues that Japan 303 and Europe 989 do not disclose the tire rotational direction side groove wall surface being continuously connected to a ground contact surface and a tire reverse rotational direction side edge portion having greater rigidity than the tire rotational direction side edge portion. This argument is not persuasive. One of ordinary skill in the art would readily appreciate that at least a portion of the chamfered surface suggested by Europe 989 contacts the road since (1) Europe 989 teaches that conicity force increases with wear in a tire having angled corners, which contact the ground (col. 1 lines 15-20, col. 4 lines 23-28) and (2) Europe 989 teaches that the curved portions ("chamfered corners") reduce, but do not eliminate, increase of conicity force with wear. Since at least a portion of the chamfered surface contacts the ground, Europe 989's teaching to round the edges (chamfer the edges) suggests the limitation of "tire rotational direction side edge portion which is chamfered so that the tire rotational direction side groove wall surface is continuously connected to a ground contact surface". Furthermore, Japan 303 teaches that the rigidity of the block at the trailing wall is greater than the rigidity at the leading wall to control vibration and reduce noise (paragraphs 6 and 8) and thereby provides ample

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suggestion to configure the block such that "a tire reverse rotational direction side edge portion ... has greater rigidity than the tire rotational direction side edge portion".

Applicant argues that the configuration of the claimed blocks allows for an even distribution of ground contact pressure on the blocks on the tread surface during normal driving conditions and when running on a circuit course (as opposed to normal street driving), where there is greater lateral acceleration during the turns. In response, examiner makes the following comments: First: Applicant's argument is not commensurate in scope with the claims and is therefore not persuasive. None of the claims require an even distribution of ground contact pressure. Second: The motivation for the combination of Japan 303 and Europe 989 includes reducing noise and preventing conicity force with wear. Reduction of noise is directly relevant to Japan 303, which teaches providing a pneumatic tire wherein noise is reduced without lowering its water discharging performance and maneuvering stability. With respect to the problem of noise reduction, "[u]nder the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed". KSR International Co. v. Teleflex Inc., 550 U.S. ----, 82 USPQ2d 1385 (2007).

Applicant argues and examiner agrees that the result of the combination of Japan 303 and Europe 989 would be the blocks of Japan 303 having sub-grooves that have rounded corners on both opposing wall faces. Examiner adds that claims 1-16 read on chamfering both edge portions.

Applicant argues that the tire reverse rotational direction side edge portion is not chamfered, as would be in the combination of Japan 303 and Europe 989. This argument is not commensurate in scope with the claims and is therefore not persuasive. None of the claims the tire reverse rotational direction side edge portion to be not chamfered.

Applicant's arguments regarding the rejection of Japan 104 in view of Japan 303 and Europe 989 are not persuasive for the reasons discussed above. The Japan 104 rejection was applied to address the subject matter of dependent claims 11 and 12. If the rejection of Japan 303 in view of Europe 989 falls, then the Japan 104 rejection would also fall.

12) No claim is allowed.

13) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven D. Maki  
July 30, 2007

  
STEVEN D. MAKI  
PRIMARY EXAMINER  
7-30-07